United States
Environmental Protection
Agency

Office of Public Affairs
Region 5
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Chicago, IL 60604

Illinois Indiana
Michigan Minnesota
Ohio Wisconsin

Ground-Water Treatment Design Nears Completion

Hagen Farm Superfund Site
Dunkirk, Wisconsin

February 1995

This fact sheet provides . . .

- Background information on the Hagen Farm Superfund Site.
- Ground-water treatment design highlights.
- Sources for additional information.

Public Meeting

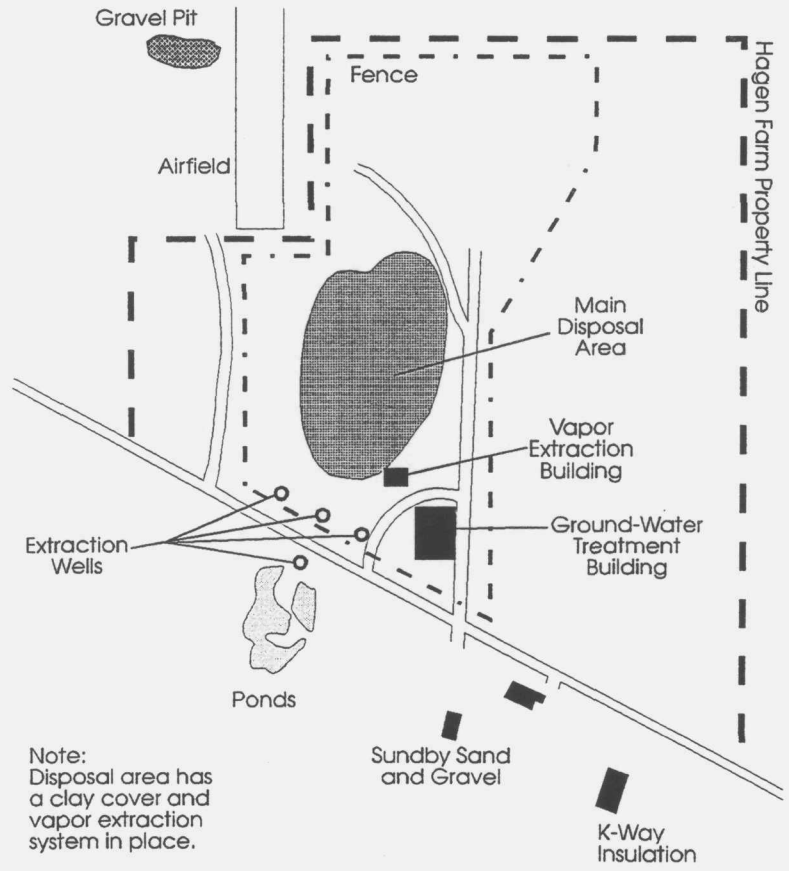
U.S. EPA will sponsor a public meeting to explain the design for the ground-water treatment facility and to answer questions about it. Everyone is welcome.

Date: Thursday, February 16, 1995

Time: 7 p.m.

Place: Dunkirk Town Hall
County Trunk Highway N
near Stoughton, Wisconsin

Site Map (Figure 1)
Hagen Farm Superfund Site
Dunkirk Township, Wisconsin



The Hagen Farm Superfund Site is located approximately one mile east of the City of Stoughton on County Highway A, in Dunkirk Township, Wisconsin. The site is a former sand and gravel pit that occupies about five acres.

In 1992, the U.S. Environmental Protection Agency (U.S. EPA) signed a document called a record of decision (ROD) for the Hagen Farm Superfund Site that addressed ground-water contamination. The ROD listed several ground-water treatment technologies.

During the last two years, U.S. EPA, in cooperation with the Wisconsin Department of Natural Resources (WDNR), tested these technologies to determine which one would be the best to use at the Hagen Farm Site. The tests, called treatability studies, demonstrated that fixed-film bio-

logical treatment (see page 3) is the most effective treatment for both on- and off-property ground-water contamination. U.S. EPA also found that it would be effective and cost efficient to treat both on- and off-property contaminated ground water in one on-property treatment facility.

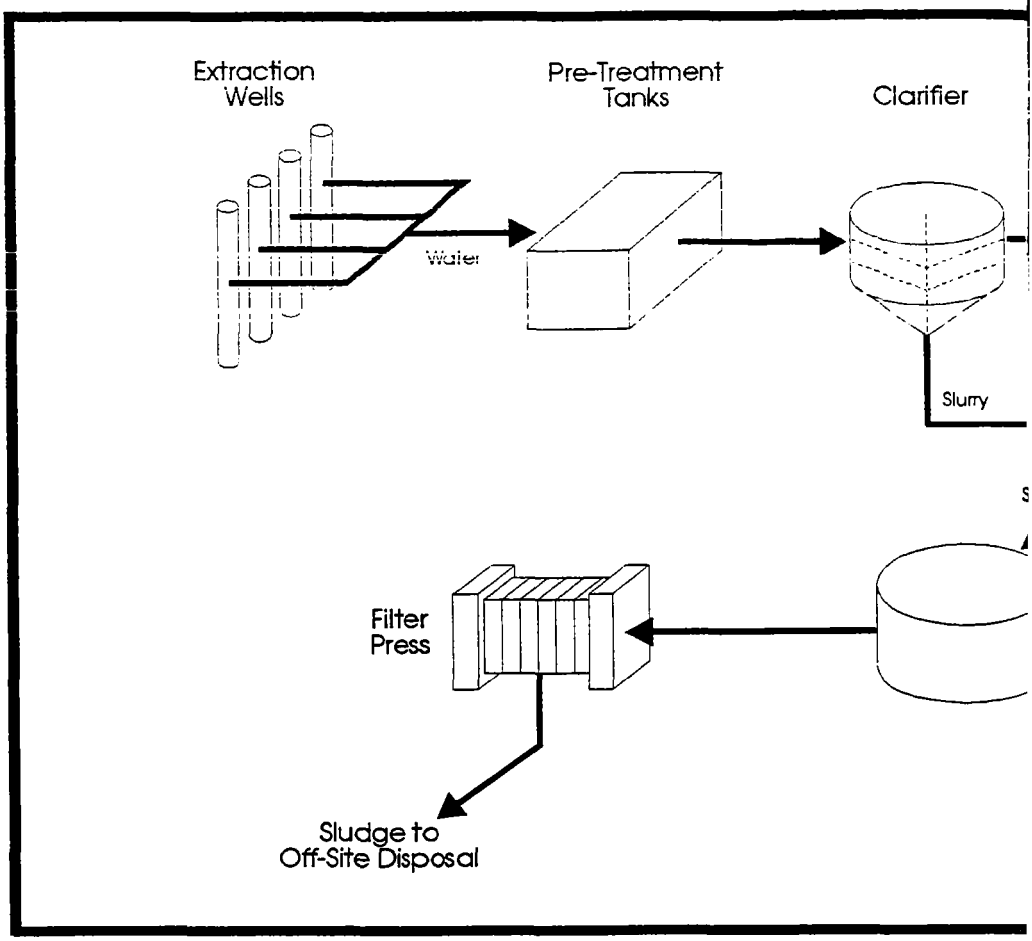
The fixed-film treatment design is almost complete. U.S. EPA expects to approve the design report in March 1995. Copies of the report will be sent to the information repositories listed on the back of this fact sheet.

Site Background

The Hagen Farm Site is a former sand and gravel pit that was used for disposal of municipal wastes, various organic materials, and waste solvents from a nearby plastics manufacturer (Figure 1). Contaminants from these wastes were absorbed through the soil into the ground water.

The chemical of most concern at the site is tetrahydrofuran (THF), a solvent that evaporates quickly when exposed to air. THF is used in manufacturing polyvinyl chloride (PVC) pipes. Natural ground-water flow has carried contaminants several hundred feet south of the property. If left untreated, THF in the ground water could pose health risks to the local community.

Ten private wells are near the site. These wells have been continuously sampled and show no sign of contamination at this time. They will continue to be monitored during the cleanup process.



Ground-Water Treatment System

The design for ground-water treatment (Figure 2) has several major components:

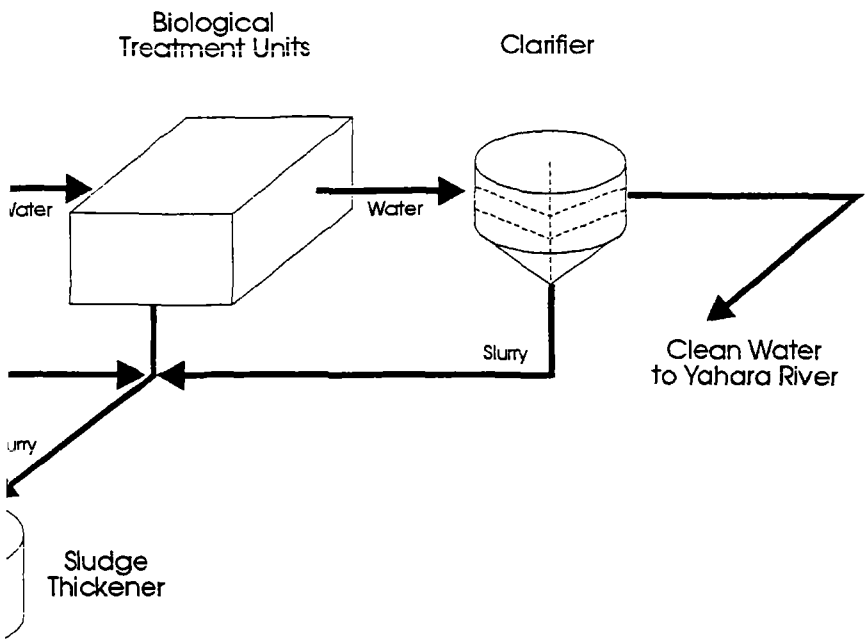
- -Extraction System
- -Pre Treatment
- -Biological Treatment
- -Discharge of Clean Water
- -Sludge Disposal

Extraction System

Three extraction wells will be installed on the property and one extraction well will be located

ISVE System

A landfill cap and an in-situ vapor extraction (ISVE) system at the source of contamination began operation in December 1993. The clay landfill cap prevents surface water from filtering through the waste, which adds contaminants to the plume below. The ISVE system helps speed the cleanup process by removing large amounts of contaminants from the source and by increasing the amount of oxygen for contaminant-eating microbes found naturally in the soil. Since its installation, the ISVE system has removed over 3,000 pounds of gasses from the landfill.



Ground-Water Treatment System (Figure 2)

south of the property to capture contaminants. Contaminated ground water will be pumped out of the ground by these wells and transported by pipes to the on-property treatment building. The treatment facility will operate 24 hours a day, and will extract about 250,000 gallons of ground water each day.

Pre Treatment

Contaminated water enters the treatment building and goes into a ***pre-treatment tank*** to remove metals and large solids. From the pre-treatment tank, the water is pumped to another type of tank called a ***clarifier***. In the clarifier, smaller particles in the water settle out and are removed.

Fixed-Film Biological Treatment

Water from the clarifier goes to ***biological treatment units***, where microbes (bacteria that eat THF) are added. Small plastic balls are added to the water. Microbes cling to, or attach themselves to, these plastic balls, enabling them to consume THF more easily. Milk whey and oxygen may also be added at this stage to nourish the microbes and to stimulate their consumption of contaminants. When the water leaves this stage, it is expected to be virtually free of contaminants.

Water leaving the biological treatment units goes to another ***clarifier*** that removes remaining particles or microbes.

Discharge of Clean Water

Treated (clean) water will be tested to ensure that it meets all WDNR discharge requirements. The clean water will then be pumped through discharge pipes to the Yahara River.

Sludge Disposal

Wastes collected from the biological treatment units and clarifiers are pumped to the ***sludge thickener*** and then to the ***filter press***. These units separate water from wastes. Wastes (sludge) will be transported off site for proper disposal; the water will be pumped back into the treatment system.

1995 Schedule

March: Ground-water treatment design will be completed. Copies of the design report will be sent to the information repositories.

May-June: Construction of the treatment facility will begin. Extraction wells will be installed first, followed by the treatment units and housing structure.

September-October: Facility construction will be completed this Fall.

October-November: U.S. EPA will sponsor an open house for the public at the ground-water treatment facility.

Sources For Additional Information

Information Repositories

Additional information about the Hagen Farm Superfund site can be obtained from the site information repositories. An information repository contains documents used to make Superfund decisions. U.S. EPA encourages citizens to visit the Hagen Farm site information repositories at the following locations:

Dunkirk Town Hall
County Trunk Highway N
near Stoughton, Wisconsin

Stoughton Public Library
304 South Fourth Street
Stoughton, Wisconsin

Citizens may also contact the following persons:

U.S. EPA

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Community Involvement Coordinator
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Mailing List Additions and Corrections

If you did not receive this fact sheet in the mail, you are not on U.S. EPA's mailing list for the Hagen Farm Superfund Site. If you would like to add your name to the list, please fill out this form and mail it to:

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